

Amendment and Response

Applicant: Jeffrey W. Chambers

Serial No.: 10/812,250

Filed: March 29, 2004

Docket No.: C364,105.101

Title: STENT POSITIONING SYSTEM AND METHOD

IN THE CLAIMS

Please cancel claim 13.

Please add claim 41.

Please amend claims 28, 31, 34, and 35 as follows:

1.(Withdrawn)A stent placement system for use with a guiding catheter as part of a stent procedure, the stent placement system comprising:

 a deployment site locator coaxially receivable within the guiding catheter, the deployment site locator including:

 a base, and

 a plurality of rods affixed to the base, each one of the plurality of rods having a distal end, wherein the deployment site locator is adapted to provide an expanded state in which the plurality of rods extend radially outward from the base to contact vascular structures;

 wherein the deployment site locator is adapted for use with a stent delivery device capable of delivering a stent.

2.(Withdrawn)The stent placement system of claim 1 further comprising a stent, wherein the deployment site locator is fixed relative to the stent.

3.(Withdrawn)The stent placement system of claim 1 further comprising a stent delivery device capable of delivering a stent, wherein the stent delivery device is coaxially receivable within the guiding catheter, and further wherein the deployment site locator is adjustably located relative to the stent.

4.(Withdrawn)The stent placement system of claim 3, wherein at least a portion the deployment site locator is configured to be coaxially disposed about the stent delivery device.

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5.(Withdrawn) The stent placement system of claim 4, wherein at least a portion of the stent delivery device is slidably engaged within a portion of the deployment site locator.

6.(Withdrawn) The stent placement system of claim 5, further comprising a carrier catheter, wherein the base of the deployment site locator is affixed to a distal end of the carrier catheter.

7.(Withdrawn) The stent placement system of claim 6, wherein the deployment site locator is affixed to the distal end of the carrier catheter via an interference fit.

8.(Withdrawn) The stent placement system of claim 6, wherein the deployment site locator is integrally formed by the carrier catheter.

9.(Withdrawn) The stent placement system of claim 3, wherein the deployment site locator is configured such that a relative position of the stent and the deployment site locator is determinable via a visual indication.

10.(Withdrawn) The stent placement system of claim 9, wherein the visual indication includes x-ray imaging.

11.(Withdrawn) The stent placement system of claim 9, wherein the deployment site locator includes radio-opaque material.

12.(Withdrawn) The stent placement system of claim 11, wherein the plurality of rods include radio-opaque material.

13.(Canceled)

14.(Withdrawn) The stent placement system of claim 1, wherein the deployment site locator is capable of transitioning between the expanded state and a collapsed state, and further

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wherein outward radial extension of the rods relative to one another in the collapsed state is less than outward radial extension of the rods relative to one another in the expanded state.

15.(Withdrawn) The stent placement system of claim 14, wherein the distal ends of the plurality of rods are free standing, and further wherein the distal ends are spaced farther apart from one another in the expanded state than in the collapsed state.

16.(Withdrawn) The stent placement system of claim 14, wherein the deployment site locator is configured to transition between the collapsed state and the expanded state via spring action.

17.(Withdrawn) The stent placement system of claim 14, wherein the deployment site locator is configured such that the plurality of rods naturally assumes the expanded state.

18.(Withdrawn) The stent placement system of claim 17, wherein the deployment site locator is configured such that the plurality of rods self-transition from the collapsed state to the expanded state upon removal of an external load.

19.(Withdrawn) The stent placement system of claim 14, wherein each of the plurality of rods has an outer thickness that is tapered relative to the base.

20.(Withdrawn) The stent placement system of claim 14, wherein the distal ends of the rods are distal a distal end of the base in the collapsed state.

21.(Withdrawn) The stent placement system of claim 14, wherein the distal ends of the rods are proximal a distal end of the base in the collapsed state.

22.(Withdrawn) The stent placement system of claim 1, wherein each of the plurality of rods has an arcuate cross-section.

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23.(Withdrawn) The stent placement system of claim 14, further comprising a carrier catheter configured to be coaxially located within the guiding catheter and disposed about a stent delivery device, wherein the base of the deployment site locator is affixed to the distal end of the carrier catheter and the carrier catheter extends a length greater than a length of the guiding catheter, such that a proximal end of the carrier catheter is capable of being moved relative a proximal end of the guiding catheter to transition the deployment site locator between the expanded stated and the collapsed state.

24.(Withdrawn) An intravascular deployment site locator comprising:
a base;
a plurality of rods affixed to the base, each one of the plurality of rods having a distal end, wherein the deployment site locator is adapted to provide an expanded state in which the plurality of rods extend outward radially to contact vascular structures proximate an ostium in order to locate the ostium; and
wherein the deployment site locator is capable of transitioning between an expanded state and a collapsed state, and further wherein the collapsed state includes the plurality of rods extending outward relative to one another less than in the expanded state.

25.(Withdrawn) The intravascular deployment site locator of claim 24, wherein the plurality of rods transition between the collapsed state and expanded state via spring action.

26.(Withdrawn) The intravascular deployment site locator of claim 24, further comprising a carrier catheter, wherein the base is affixed to a distal end of the carrier catheter.

27.(Withdrawn) The intravascular deployment site locator of claim 24, wherein the plurality of rods each includes a radio-opaque material.

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28.(Currently Amended) A method of deploying an intravascular stent within a patient, the method comprising:

delivering a distal end of a guiding catheter adjacent an ostium of a vessel to be stented;
guiding a deployment site locator through the guiding catheter, the deployment site locator including a base and a plurality of rods affixed to the base;
extending the plurality of rods from the distal end of the guiding catheter;
determining a position of the ostium by contacting structures proximate the ostium with at least one of the plurality of rods;
delivering a stent through the guiding catheter to a desired stent location, wherein the desired stent location is based upon the determined position of the ostium; and
deploying the stent at the desired stent location; and
withdrawing the deployment site locator from the patient.

29.(Original) The method of claim 28, wherein the stent is fixed relative to the deployment site locator such that the stent is delivered at a fixed distance from the deployment site locator to the desired stent location following determination of the position of the ostium.

30.(Original) The method of claim 28, wherein delivering the stent to the desired stent location includes determining the position of the stent and the deployment site locator by a visual indication and adjusting the position of the stent relative to the deployment site locator such that the stent is delivered to the desired stent location.

31.(Currently Amended) The method of claim 2830, wherein the visual indication includes x-ray imaging.

32.(Original) The method of claim 30, wherein adjusting the position of the stent relative to the deployment site locator includes visually confirming that at least one radio-opaque marker associated with the stent is aligned with at least one radio-opaque marker associated with the deployment site locator.

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33.(Original) The method of claim 28, wherein the vessel to be stented is a coronary artery and the vascular structures proximate the ostium include an aorta wall.

34.(Currently Amended) The method of claim 28, wherein the desired stent location is such that a proximal end of the stent is located at the ostium of the artery vessel to be stented.

35.(Currently Amended) The method of claim 28, further comprising delivering a guide wire into the artery vessel to be stented via the guide catheter, and wherein guiding the deployment site locator through the guide catheter includes guiding the deployment site locator over the guide wire to the ostium of the vessel to be stented.

36.(Original) The method of claim 35, wherein delivering the stent includes guiding a stent delivery device over the guide wire and through the deployment site locator into the vessel to be stented.

37.(Original) The method of claim 28, wherein each one of the plurality of rods is configured to extend outward radially to contact the vascular structures proximate the ostium.

38.(Original) The method of claim 28, wherein extending the plurality of rods from the distal end of the guide catheter further includes transitioning the deployment site locator from a collapsed state to an expanded state, and further wherein the expanded state includes a distal portion of each of the plurality of rods being spaced substantially farther away from one another than in the collapsed state.

39.(Original) The method of claim 38, wherein the plurality of rods extend away from one another in the expanded state and are substantially parallel in the collapsed state.

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40.(Original) The method of claim 38, wherein transitioning the deployment site locator from a collapsed state to an expanded state is accomplished via spring action by loading and unloading the plurality of rods.

41.(New) The method of claim 38, wherein the stent remains in the desired location upon withdrawing of the deployment site locator from the patient.